Carlsbad Energy Center Project

(07-AFC-6)

Data Responses, Set 3A

(Responses to Data Requests 126 though 131)

Submitted to

California Energy Commission

Submitted by

Carlsbad Energy Center LLC

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With Assistance from

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Contents

Introduction

Attached are Carlsbad Energy Center LLC's (Applicant) responses to the California Energy Commission (CEC) staff's Data Requests 3A numbered 126 through 131 – Cultural Resources for the Carlsbad Energy Center Project (CECP). The CEC staff served these data requests on September 17, 2008, as part of the discovery process for CECP's Application for Certification (AFC) (07 AFC 6). The responses are presented in the same order as the CEC staff presented them and are keyed to the Data Request numbers (126 through 131).

Additional documents submitted in response to a data request i.e., stand-alone documents) are found at the end of this Data Response submittal and are not sequentially page-numbered consistently with the remainder of the document, though they may have their own internal page numbering system.

The Applicant looks forward to working cooperatively with CEC staff as CECP proceeds through the siting process. We trust that these responses address the staff's questions and remain available to have any additional dialogue the staff may require.

Cultural Resources (126 - 131)

Background

The Cultural Resources section of the *Project Enhancements and Refinements Document* indicates that the locations of the project enhancements and refinements are located within the 1-mile cultural resource study area discussed in the AFC. However, according to AFC Figure 5.3-2, the proposed enhancements and refinements are not all located in the area that was previously surveyed for the Cultural Resources Section of the AFC. Staff needs cultural resources survey information for the locations of project enhancements and refinements to complete the cultural resources analysis.

Data Request

126. Please provide a discussion of the anticipated ground disturbance necessary to construct the new SDG&E 230-kV switchyard that includes the maximum depth of disturbance.

Response:

A total of six exploratory, geotechnical soil borings, each approximately 40 feet deep, will be required in the area of the proposed new SDG&E 230kV switchyard to establish the foundation and structural engineering requirements for the switchyard.

For construction, at a minimum, the entire area that will be used for the new switchyard will be graded and excavated to a depth of at least one to two feet to provide for drainage, road installation, yard base, and surfacing. There is a possibility of additional mass excavation and replacement or recompaction of soils if poor soils are found during the geotechnical investigations. For construction of the proposed A-frame structures of the switchyard, it is likely that pier foundations will be used that could be four to six feet in diameter and range from 15 to 25 feet deep depending upon load and soil conditions. As currently proposed, the bus supports, termination structure and tie downs will be placed on drilled piers approximately 30 inches in diameter and 6 to 10 feet deep. Switch stands are likely to be mounted on pads that measure 25 by 14 feet and are 1.5 feet thick. Circuit breakers will also be set upon 18 inch thick mats.

The 230kV interconnection from CECP to the new SDG&E switchyard will be in underground power ducts that will likely be up to 10 to 12 feet deep and 3 to 4 feet wide depending on duct configuration.

Data Request

127. Please conduct and provide the results of a cultural resources survey of the proposed location of the new SDG&E 230-kV switchyard and any proposed pole locations for the new 230-kV line, including the portion of the line that would be underground and a buffer area of 200 feet around the proposed SDG&E 230-kV switchyard location.

Response:

A follow-on cultural resource survey for the proposed location of the new SDG&E 230-kV switchyard and proposed route for the aboveground (pole mounted) and underground portion of the new 230-kV line as well as the 200 foot buffer was conducted by a CH2M HILL archaeologist on October 1, 2008. The Follow-on Cultural Resources Assessment is attached as New Attachment DR 127A. As noted in the follow-on Assessment, no cultural resources of any kind were observed in route for the interconnection, or in the area of the proposed new switchyard or the 200 foot buffer. The entire area surveyed has been heavily and completely graded and ground visibility over the majority of the proposed switchyard is excellent at 100 percent. Visibility in small areas along the fence lines was partially obscured by vegetation. Additional ground disturbance was observed in several locations of the proposed switchyard, including areas that appear to have been dug for sewer and water lines, as portions of water lines and one man-hole cover were observed. A portion of the proposed switchyard is currently used for storage and another part is currently used for parking. Some modern trash was observed along the fence lines. Observed sediment over the entire proposed switchyard consists of coarse grained sand with gravel.

Data Request

128. Please provide a figure similar in scale to AFC Figure 5.3-2 that identifies the cultural resources survey area in relation to the proposed enhancements and refinements.

Response:

A new figure depicting the additional survey area has been included with the Follow-on Cultural Resources Assessment (see Attachment DR 127A).

Data Request

129. Please discuss whether there are any buildings or structures currently located on or adjacent to the SDG&E parcel where the 230-kV switchyard would be constructed? If so, please provide a description, including age, of any buildings or structures that are present.

Response:

There are no buildings or structures currently located on the SDG&E parcel where the 230-kV switchyard will be constructed. The adjacent Cannon Substation, and its appurtenant structures, was previously evaluated in the historic resources inventory and evaluation report prepared for the original filing as part of Appendix 5.3B of the AFC.

Background

The *Project Enhancements and Refinements Document* included Revised Figure 2.1-1 which identifies the Cannon Expansion (proposed) and the Relocated 138-kV Encina Switchyard (proposed) near the new SDG&E 230-kV switchyard. There does not seem to be a discussion of these features in the *Project Enhancements and Refinements Document*. Staff needs clarification regarding the role these proposed features have in the construction of the Carlsbad Energy Center Project to complete the cultural resources analysis.

Data Request

130. Please clarify whether the Cannon Expansion (proposed) and the Relocated 138-kV Encina Switchyard (proposed) are part of the proposed Carlsbad Energy Center. If they are part of the project, please provide a discussion of the Cannon Expansion (proposed) and the Relocated 138-kV Encina Switchyard (proposed) that includes how they will function as part of the project, and anticipated ground disturbance, including depth of disturbance and grading, associated with their construction.

Response:

SDG&E's proposed Cannon Expansion and Relocated 138-kV Encina Switchyard are not part of the CECP, nor do they support the CECP. These are future SDG&E projects that are not associated with CECP or with the proposed new SDG&E 230kV switchyard.

Data Request

131. If part of the project, please conduct a cultural resources survey of the locations of the Relocated 138-kV Encina Switchyard (proposed) and the Cannon Expansion (proposed) and provide the survey results to staff. Please also survey a 200-foot survey buffer area around both proposed locations.

Response:

As noted in Data Response 130 above, SDG&E's proposed Cannon Expansion and Relocated 138-kV Encina Switchyard are not part of the CECP, nor do they support the CECP. These are future SDG&E projects that are not associated with CECP or with the proposed new SDG&E 230kV switchyard.

ATTACHMENT DR 127A

Follow-on Cultural Resources Assessment

Carlsbad Energy Center Project (CECP)

Follow-on Cultural Resources Assessment

PREPARED BY: Natalie Lawson/CH2M HILL

Clint Helton/CH2M HILL

DATE: October 8, 2008

INTRODUCTION

As requested by the California Energy Commission (CEC), CH2M HILL completed a follow-on cultural resources pedestrian field survey for the proposed location of a new SDG&E switchyard and proposed route of the aboveground (pole mounted) and underground portion for the new 230 kV line that will interconnect to the new SDG&E 230kV switchyard, which included a 200 ft buffer around the new switchyard and route for the interconnection. This follow-on cultural resource survey was requested because the original pedestrian survey for the Carlsbad Energy Center Project (CECP) did not include the new 230kV switchyard, which was added after the original survey was completed (see Figure 1). A CH2M HILL archaeologist conducted the additional survey on October 1, 2008. A summary of the findings is presented below. Because the findings of the follow-on survey were negative (i.e., no evidence of the presence or potential presence of cultural resources), this technical memorandum has been prepared in lieu of a detailed survey report.

FOLLOW ON CULTURAL RESOURCES SURVEY RESULTS

On October 1, 2008, Gloriella Cardenas, M.A., RPA of CH2M HILL under the supervision of Clint Helton, M.A., RPA of CH2M HILL, performed a cultural resources pedestrian inventory of the 230-kV switchyard and proposed 230kV interconnection route in order to identify prehistoric or historic cultural resources. The "survey area" included the switchyard, the route of the 230kV interconnection, as well as a 200 ft buffer around the survey area. The site is located within an existing SDG&E parcel that includes the existing Cannon Switchyard and a SDG&E training yard. The site is located north of Cannon Road, east of the Burlington Northern Santa Fe (BNSF) rail line, and west of Interstate 5 (I-5), within the City of Carlsbad, California.

The existing Encina Power Plant property and the SDG&E parcel have been subjected to heavy disturbance since the construction of the plant in 1952. Historic photographs on file at the Encina Power Plant reveal that the entire property and the SDG&E parcel, have been graded with some areas leveled and filled.

The original pedestrian survey for the CECP was conducted in July of 2007 (Helton 2007). A technical memo was prepared for the original survey that contains complete information

FIGURE 1.
CULTURAL RESOURCES SURVEY AREA
CARLSBAD ENERGY CENTER PROJECT
CARLSBAD, CALIFORNIA

CH2MHILL

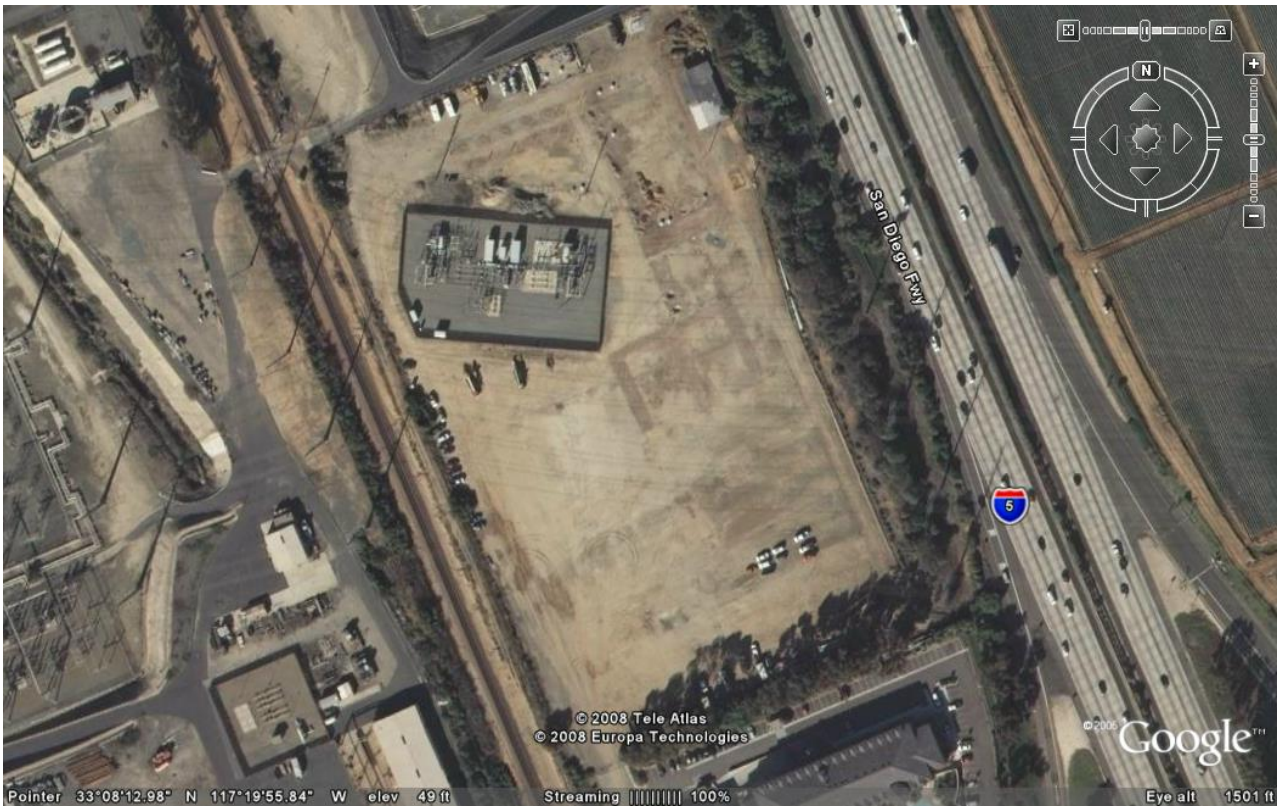

Figure 2. Aerial image showing present condition of survey area.

regarding affected environment and archival research and can be found as Appendix 5.3B of the CECP AFC. Also found in Appendix 5.3B of the AFC is a separate technical report (JRP 2007) describing the results of an architectural survey conducted to consider the potential impact of the CECP on historic buildings and structures.

Field Survey

Using pedestrian transects spaced no more than 10 meters apart, Ms. Cardenas surveyed the proposed location of the new SDG&E 230kVswitchyard and route for the CECP interconnection to the new switchyard, and a 200 ft buffer where possible. The survey stopped at the I-5 right-of-way (ROW) and at the BNSF rail line ROW.

The survey area has been completely graded and leveled by heavy machinery and ground visibility over the majority of the survey area was excellent at 100 percent. Visibility in small areas along the fence lines were partially obscured by vegetation. Additional ground disturbance was observed in several locations within the survey area, including areas which appear to have been excavated for sewer and water lines, as portions of water lines and one man-hole cover were observed. Part of the area proposed for the new switchyard is currently used for storage and part is currently used for parking. Some modern trash was

observed along the fence lines. Observed sediment over the entire proposed switchyard consists of coarse grained sand with gravel. No cultural resources were present and sensitivity is considered very low within the surveyed area.

RECOMMENDATIONS

No prehistoric or historic archaeological resources and no historic structures were encountered during the survey. Since no objects or sites were located, no site records were prepared. No impact to any cultural resources is expected to occur within the SDG&E parcel and no further cultural resource investigations are recommended.

REFERENCES

Franklin, JRP Historical Consulting. 2007. Historical Resources Evaluation Report: Carlsbad Energy Center.

Helton. 2007. Carlsbad Energy Center Project, Cultural Resources Assessment, Carlsbad, California.